

## SEQUENCE LISTING

&lt;110&gt; INCYTE PHARMACEUTICALS, INC.

BANDMAN, Olga

LAL, Preeti

TANG, Y. Tom

CORLEY, Neil C.

GUEGLER, Karl J.

BAUGHN, Mariah R.

PATTERSON, Chandra

&lt;120&gt; CELL CYCLE REGULATION PROTEINS

&lt;130&gt; PF-0531 PCT

&lt;140&gt; To Be Assigned

&lt;141&gt; Herewith

&lt;150&gt; 60/088,695

&lt;151&gt; 1998-06-08

&lt;160&gt; 35

&lt;170&gt; PERL Program

&lt;210&gt; 1

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte clone 037377

&lt;400&gt; 1

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Pro	Glu	Pro	Gly	Pro	Ser	Ser	Ser	Ile	Gly	Ser	Pro	Gln	Ala	Ser
				35					40					45
Ser	Pro	Pro	Arg	Pro	Asn	His	Tyr	Leu	Leu	Ile	Asp	Thr	Gln	Gly
				50					55					60
Val	Pro	Tyr	Thr	Val	Leu	Val	Asp	Glu	Glu	Ser	Gln	Arg	Glu	Pro
				65					70					75
Gly	Ala	Ser	Gly	Ala	Pro	Gly	Gln	Lys	Lys	Cys	Tyr	Ser	Cys	Pro
				80					85					90
Val	Cys	Ser	Arg	Val	Phe	Glu	Tyr	Met	Ser	Tyr	Leu	Gln	Arg	His
				95					100					105
Ser	Ile	Thr	His	Ser	Glu	Val	Lys	Pro	Phe	Glu	Cys	Asp	Ile	Cys
				110					115					120
Gly	Lys	Ala	Phe	Lys	Arg	Ala	Ser	His	Leu	Ala	Arg	His	His	Ser
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Ile	His	Leu	Ala	Gly	Gly	Gly	Arg	Pro	His	Gly	Cys	Pro	Leu	Cys
				140					145					150

Pro	Arg	Arg	Phe	Arg	Asp	Ala	Gly	Glu	Leu	Ala	Gln	His	Ser	Arg
				155					160					165
Val	His	Ser	Gly	Glu	Arg	Pro	Phe	Gln	Cys	Pro	His	Cys	Pro	Arg
				170					175					180
Arg	Phe	Met	Glu	Gln	Asn	Thr	Leu	Gln	Lys	His	Thr	Arg	Trp	Lys
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His	Pro													

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 <223> Incyte clone 162871

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Arg	Gly	Val	Val	Leu	Phe	Phe	Ile	Gly	Val	Phe	Leu	Ala	Leu	Val
				35					40					45
Leu	Asn	Leu	Leu	Gln	Ile	Gln	Arg	Asn	Val	Thr	Leu	Phe	Pro	Pro
				50					55					60
Asp	Val	Ile	Ala	Ser	Ile	Phe	Ser	Ser	Ala	Trp	Trp	Val	Pro	Pro
				65					70					75
Cys	Cys	Gly	Thr	Ala	Ser	Ala	Val	Ile	Gly	Leu	Leu	Tyr	Pro	Cys
				80					85					90
Ile	Asp	Arg	His	Leu	Gly	Glu	Pro	His	Lys	Phe	Lys	Arg	Glu	Trp
				95					100					105
Ser	Ser	Val	Met	Arg	Cys	Val	Ala	Val	Phe	Val	Gly	Ile	Asn	His
				110					115					120
Ala	Ser	Ala	Lys	Val	Asp	Phe	Asp	Asn	Asn	Ile	Gln	Leu	Ser	Leu
				125					130					135
Thr	Leu	Ala	Ala	Leu	Ser	Ile	Gly	Leu	Trp	Trp	Thr	Phe	Asp	Arg
				140					145					150
Ser	Arg	Ser	Gly	Phe	Gly	Leu	Gly	Val	Gly	Ile	Ala	Phe	Leu	Ala
				155					160					165
Thr	Val	Val	Thr	Gln	Leu	Leu	Val	Tyr	Asn	Gly	Val	Tyr	Gln	Tyr
				170					175					180
Thr	Ser	Pro	Asp	Phe	Leu	Tyr	Val	Arg	Ser	Trp	Leu	Pro	Cys	Ile
				185					190					195
Phe	Phe	Ala	Gly	Gly	Ile	Thr	Met	Gly	Asn	Ile	Gly	Arg	Gln	Leu
				200					205					210
Ala	Met	Tyr	Glu	Cys	Lys	Val	Ile	Ala	Glu	Lys	Ser	His	Gln	Glu
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 <213> Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte clone 236062

&lt;400&gt; 3

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          20          25          30
Ala Ala Val Ala Gln Ala Pro Pro Ala Val Ala Ser Ser Ser Leu
          35          40          45
Phe Asp Leu Ser Val Leu Lys Leu His His Ser Leu Gln Gln Ser
          50          55          60
Glu Pro Asp Leu Arg His Leu Val Leu Val Val Asn Thr Leu Arg
          65          70          75
Arg Ile Gln Ala Ser Met Ala Pro Ala Ala Leu Pro Pro Val
          80          85          90
Pro Ser Pro Pro Ala Ala Pro Ser Val Ala Asp Asn Leu Leu Ala
          95          100          105
Ser Ser Asp Ala Ala Leu Ser Ala Ser Met Ala Ser Leu Leu Glu
          110          115          120
Asp Leu Ser His Ile Glu Gly Leu Ser Gln Ala Pro Gln Pro Leu
          125          130          135
Ala Asp Glu Gly Pro Pro Gly Arg Ser Ile Gly Gly Ala Ala Pro
          140          145          150
Ser Leu Gly Ala Leu Asp Leu Leu Gly Pro Ala Thr Gly Cys Leu
          155          160          165
Leu Asp Asp Gly Leu Glu Gly Leu Phe Glu Asp Ile Asp Thr Ser
          170          175          180
Met Tyr Asp Asn Glu Leu Trp Ala Pro Ala Ser Glu Gly Leu Lys
          185          190          195
Pro Gly Pro Glu Asp Gly Pro Gly Lys Glu Glu Ala Pro Glu Leu
          200          205          210
Asp Glu Ala Glu Leu Asp Tyr Leu Met Asp Val Leu Val Gly Thr
          215          220          225
Gln Ala Leu Glu Arg Pro Pro Gly Pro Gly Arg
          230          235

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&lt;210&gt; 4

&lt;211&gt; 351

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte clone 1596581

&lt;400&gt; 4

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Met Ile Thr Asp Ala Leu Thr Ala Ile Ala Leu Tyr Phe Ala Ile
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Gln Asp Phe Asn Lys Val Val Phe Lys Lys Gln Lys Leu Leu Leu

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20	25	30
Glu Leu Asp Gln Tyr Ala Pro Asp Val	Ala Glu Leu Ile Arg Thr	
35	40	45
Pro Met Glu Met Arg Tyr Ile Pro Leu Lys	Val Ala Leu Phe Tyr	
50	55	60
Leu Leu Asn Pro Tyr Thr Ile Leu Ser Cys	Val Ala Lys Ser Thr	
65	70	75
Cys Ala Ile Asn Asn Thr Leu Ile Ala Phe	Phe Ile Leu Thr Thr	
80	85	90
Ile Lys Gly Ser Ala Phe Leu Ser Ala Ile	Phe Leu Ala Leu Ala	
95	100	105
Thr Tyr Gln Ser Leu Tyr Pro Leu Thr Leu	Phe Val Pro Gly Leu	
110	115	120
Leu Tyr Leu Leu Gln Arg Gln Tyr Ile Pro	Val Lys Met Lys Ser	
125	130	135
Lys Ala Phe Trp Ile Phe Ser Trp Glu Tyr	Ala Met Met Tyr Val	
140	145	150
Gly Ser Leu Val Val Ile Ile Cys Leu Ser	Phe Phe Leu Leu Ser	
155	160	165
Ser Trp Asp Phe Ile Pro Ala Val Tyr Gly	Phe Ile Leu Ser Val	
170	175	180
Pro Asp Leu Thr Pro Asn Ile Gly Leu Phe	Trp Tyr Phe Phe Ala	
185	190	195
Glu Met Phe Glu His Phe Ser Leu Phe Phe	Val Cys Val Phe Gln	
200	205	210
Ile Asn Val Phe Phe Tyr Thr Ile Pro Leu	Ala Ile Lys Leu Lys	
215	220	225
Glu His Pro Ile Phe Phe Met Phe Ile Gln	Ile Ala Val Ile Ala	
230	235	240
Ile Phe Lys Ser Tyr Pro Thr Val Gly Asp	Val Ala Leu Tyr Met	
245	250	255
Ala Phe Phe Pro Val Trp Asn His Leu Tyr	Arg Phe Leu Arg Asn	
260	265	270
Ile Phe Val Leu Thr Cys Ile Ile Ile Val	Cys Ser Leu Leu Phe	
275	280	285
Pro Val Leu Trp His Leu Trp Ile Tyr Ala	Gly Ser Ala Asn Ser	
290	295	300
Asn Phe Phe Tyr Ala Ile Thr Leu Thr Phe	Asn Val Gly Gln Ile	
305	310	315
Leu Leu Ile Ser Asp Tyr Phe Tyr Ala Phe	Leu Arg Arg Glu Tyr	
320	325	330
Tyr Leu Thr His Gly Leu Tyr Leu Thr Ala	Lys Asp Gly Thr Glu	
335	340	345
Ala Met Leu Val Leu Lys		
350		

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 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <223> Incyte clone 1853196

&lt;400&gt; 5

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Val	Ile	Ser	His	Glu	Gly	Ser	Asp	Ile	Glu	Met	Leu	Asn	Ser	Val
				20					25					30
Thr	Pro	Thr	Asp	Ser	Cys	Glu	Pro	Ala	Pro	Glu	Cys	Ser	Ser	Leu
				35					40					45
Glu	Gln	Glu	Glu	Leu	Gln	Ala	Leu	Gln	Ile	Glu	Gln	Gly	Glu	Ser
				50					55					60
Ser	Gln	Asn	Gly	Thr	Val	Leu	Met	Glu	Glu	Thr	Ala	Tyr	Pro	Ala
				65					70					75
Leu	Glu	Glu	Thr	Ser	Ser	Thr	Ile	Glu	Ala	Glu	Glu	Gln	Lys	Ile
				80					85					90
Pro	Glu	Asp	Ser	Ile	Tyr	Ile	Gly	Thr	Ala	Ser	Asp	Asp	Ser	Asp
				95					100					105
Ile	Val	Thr	Leu	Glu	Pro	Pro	Lys	Leu	Glu	Glu	Ile	Gly	Asn	Gln
				110					115					120
Glu	Val	Val	Ile	Val	Glu	Glu	Ala	Gln	Ser	Ser	Glu	Asp	Phe	Asn
				125					130					135
Met	Gly	Ser	Ser	Ser	Ser	Ser	Gln	Tyr	Thr	Phe	Cys	Gln	Pro	Glu
				140					145					150
Thr	Val	Phe	Ser	Ser	Gln	Pro	Ser	Asp	Asp	Glu	Ser	Ser	Ser	Asp
				155					160					165
Glu	Thr	Ser	Asn	Gln	Pro	Ser	Pro	Ala	Phe	Arg	Arg	Arg	Arg	Ala
				170					175					180
Arg	Lys	Lys	Thr	Val	Ser	Ala	Ser	Glu	Ser	Glu	Asp	Arg	Leu	Val
				185					190					195
Ala	Glu	Gln	Glu	Thr	Glu	Pro	Ser	Lys	Glu	Leu	Ser	Lys	Arg	Gln
				200					205					210
Phe	Ser	Ser	Gly	Leu	Asn	Lys	Cys	Val	Ile	Leu	Ala	Leu	Val	Ile
				215					220					225
Ala	Ile	Ser	Met	Gly	Phe	Gly	His	Phe	Tyr	Gly	Thr	Ile	Gln	Ile
				230					235					240
Gln	Lys	Arg	Gln	Gln	Leu	Val	Arg	Lys	Ile	His	Glu	Asp	Glu	Leu
				245					250					255
Asn	Asp	Met	Lys	Asp	Tyr	Leu	Ser	Gln	Cys	Gln	Gln	Glu	Gln	Glu
				260					265					270
Ser	Phe	Ile	Asp	Tyr	Lys	Ser	Leu	Lys	Glu	Asn	Leu	Ala	Arg	Cys
				275					280					285
Trp	Thr	Leu	Thr	Glu	Ala	Glu	Lys	Met	Ser	Phe	Glu	Thr	Gln	Lys
				290					295					300
Thr	Asn	Leu	Ala	Thr	Glu	Asn	Gln	Tyr	Leu	Arg	Val	Ser	Leu	Glu
				305					310					315
Lys	Glu	Glu	Lys	Ala	Leu	Ser	Ser	Leu	Gln	Glu	Glu	Leu	Asn	Lys
				320					325					330
Leu	Arg	Glu	Gln	Ile	Arg	Ile	Leu	Glu	Asp	Lys	Gly	Thr	Ser	Thr
				335					340					345
Glu	Leu	Val	Lys	Glu	Asn	Gln	Lys	Leu	Lys	Gln	His	Leu	Glu	Glu
				350					355					360
Glu	Lys	Gln	Lys	Lys	His	Ser	Phe	Leu	Ser	Gln	Arg	Glu	Thr	Leu
				365					370					375
Leu	Thr	Glu	Ala	Lys	Met	Leu	Lys	Arg	Glu	Leu	Glu	Arg	Glu	Arg
				380					385					390
Leu	Val	Thr	Thr	Ala	Leu	Arg	Gly	Glu	Leu	Gln	Gln	Leu	Ser	Gly
				395					400					405
Ser	Gln	Leu	His	Gly	Lys	Ser	Asp	Ser	Pro	Asn	Val	Tyr	Thr	Glu
				410					415					420

Lys	Lys	Glu	Ile	Ala	Ile	Leu	Arg	Glu	Arg	Leu	Thr	Glu	Leu	Glu	425	430	435
Arg	Lys	Leu	Thr	Phe	Glu	Gln	Gln	Arg	Ser	Asp	Leu	Trp	Glu	Arg	440	445	450
Leu	Tyr	Val	Glu	Ala	Lys	Asp	Gln	Asn	Gly	Lys	Gln	Gly	Thr	Asp	455	460	465
Gly	Lys	Lys	Lys	Gly	Gly	Arg	Gly	Ser	His	Arg	Ala	Lys	Asn	Lys	470	475	480
Ser	Lys	Glu	Thr	Phe	Leu	Gly	Ser	Val	Lys	Glu	Thr	Phe	Asp	Ala	485	490	495
Met	Lys	Asn	Ser	Thr	Lys	Glu	Phe	Val	Arg	His	His	Lys	Glu	Lys	500	505	510
Ile	Lys	Gln	Ala	Lys	Glu	Ala	Val	Lys	Glu	Asn	Leu	Lys	Lys	Phe	515	520	525
Ser	Asp	Ser	Val	Lys	Ser	Thr	Phe	Arg	His	Phe	Lys	Asp	Thr	Thr	530	535	540
Lys	Asn	Ile	Phe	Asp	Glu	Lys	Gly	Asn	Lys	Arg	Phe	Gly	Ala	Thr	545	550	555
Lys	Glu	Ala	Ala	Glu	Lys	Pro	Arg	Thr	Val	Phe	Ser	Asp	Tyr	Leu	560	565	570
His	Pro	Gln	Tyr	Lys	Ala	Pro	Thr	Glu	Asn	His	His	Asn	Arg	Gly	575	580	585
Pro	Thr	Met	Gln	Asn	Asp	Gly	Arg	Lys	Glu	Lys	Pro	Val	His	Phe	590	595	600
Lys	Glu	Phe	Arg	Lys	Asn	Thr	Asn	Ser	Lys	Lys	Cys	Ser	Pro	Gly	605	610	615
His	Asp	Cys	Arg	Glu	Asn	Ser	His	Ser	Phe	Arg	Lys	Ala	Cys	Ser	620	625	630
Gly	Val	Phe	Asp	Cys	Ala	Gln	Gln	Glu	Ser	Met	Ser	Leu	Phe	Asn	635	640	645
Thr	Val	Val	Asn	Pro	Ile	Arg	Met	Asp	Glu	Phe	Arg	Gln	Ile	Ile	650	655	660
Gln	Arg	Tyr	Met	Leu	Lys	Glu	Leu	Asp	Thr	Phe	Cys	His	Trp	Asn	665	670	675
Glu	Leu	Asp	Gln	Phe	Ile	Asn	Lys	Phe	Phe	Leu	Asn	Gly	Val	Phe	680	685	690
Ile	His	Asp	Gln	Lys	Leu	Phe	Thr	Asp	Phe	Val	Asn	Asp	Val	Lys	695	700	705
Asp	Tyr	Leu	Arg	Asn	Met	Lys	Glu	Tyr	Glu	Val	Asp	Asn	Asp	Gly	710	715	720
Val	Phe	Glu	Lys	Leu	Asp	Glu	Tyr	Ile	Tyr	Arg	His	Phe	Phe	Gly	725	730	735
His	Thr	Phe	Ser	Pro	Pro	Tyr	Gly	Pro	Arg	Ser	Val	Tyr	Ile	Lys	740	745	750
Pro	Cys	His	Tyr	Ser	Ser	Leu									755		

&lt;210&gt; 6

&lt;211&gt; 1378

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte clone 037377

&lt;400&gt; 6

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&lt;210&gt; 7

&lt;211&gt; 1207

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte clone 162871

&lt;400&gt; 7

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gcccata

1207

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 <223> Incyte clone 236062

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 cactttggag agacagaatc tagtcctggg caacttcaca tccgtcctcc tgtctcaggg 1020  
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 gaattccctg gccctggggt catagcttgg gctgttcctt ctctgatacg ggaagagacc 1140  
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 <211> 1631  
 <212> DNA  
 <213> Homo sapiens

<220>  
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 <223> Incyte clone 1596581

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 acaccctcat tgctttcttc attttgacta cgataaaaagg cagtgtcttc ctgagtgcta 540  
 tttttcttgc cttagcgaca taccagtctc tgtaccact caccttgttt gtcccaggac 600  
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taaaaaaaaa a 1631

```

&lt;210&gt; 10

&lt;211&gt; 3006

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte clone 1853196

&lt;400&gt; 10

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tccagctttg gaggaacca gctcaacaat tgaggcagag gaacaaaaga taccgaaga 360
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gttagaagaa attggaatc aagaagtgtt cattgttgaa gaagcacaga gttcagaaga 480
ctttaacatg ggctcttctt ctgacagcca gtatacttct tgtcagccag aaactgtatt 540
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tgcctttaga ctagccctg ctaggaagaa gaccgtttct gcttcagaat ctgaagaccg 660
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tgaggcaaaa gatcaaatg gaaaacaagg aacagatgga aaaaagaaag ggggcagagg 1500
aagccacagg gctaaaaata agtcaaagga aacatttttg ggttcagtta aggaacatt 1560
tgatgccatg aagaattcta ccaaggagtt tgtaaggcat cataaagaga aaattaagca 1620

```

```

ggctaaagaa gctgtgaagg aaaatctgaa aaaattctca gattcagtta aatccacttt 1680
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tgctacaaaa gaagcagctg aaaaaccaag aacagttttt agtgactatt tacatccaca 1800
gtataaggca cctacagaaa accatcataa tagaggccct actatgcaa atgatggaag 1860
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tgtgta                                     3006

```

<210> 11  
<211> 684  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 269, 285, 295, 312, 366, 375, 378, 397, 406, 428, 495, 501, 503  
<221> unsure  
<222> 586, 592, 610, 613, 643  
<223> a or g or c or t, unknown, or other

<220>  
<221> misc\_feature  
<223> Incyte clone 108390F1

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<400> 11
cagtatatatc attgggagaa tctgacttgc catgtaactg actaccactt aactgctgga 60
gttccccctt taaagccgta gttactagtc gttctctctc cagttctctc tttagcatct 120
ttgcttctgt caacagagtc tccctttgac taagaaagct gtgttttttc tgcttttccct 180
cttccaaatg ctgcttaagt ttctgatttt ctttaactaa ttcagtactt gtccctttat 240
cttccaatat tctaattctgt tctcttagnt tgtttaactc ttccngtaat gaggntaagg 300
ctttttcttc cntctccagg gatactctta aatactgatt ttctgtagca aggttcgttt 360
ctgagnttca aaggncanct tctctgcttc agtaagngtc caacancttg caagatttct 420
ttcaatgnct tataatctat aaaagttctt gttcccgttg acacggggaa ggtaatcctc 480
atatcatcaa ttcanccttca ngnatcttct tgactaactg ttgacggttc tgaatctgaa 540
tgtgccatag gaatggccaa atcccagctt gattgcaatc accaangcaa gnataacaca 600
cttattgggn ccnctactga actgacggtt actcaactcc ttnggagggg cagttcttgt 660
tcagcaacta gccgggtctc agat                                     684

```

<210> 12  
 <211> 416  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <223> Incyte clone 1211009R1

<400> 12  
 aagaattcta ccaaggagtt tgtaaggcat cataaagaga aaattaagca ggctaaagaa 60  
 gctgtgaagg aaaatctgaa aaaattctca gattcagtta aatccacttt cagacacttt 120  
 aaagatacca ccaagaatat ctttgatgaa aagggttaata aaagatttgg tgctacaaaa 180  
 gaagcagctg aaaaaccaag aacagttttt agtgactatt tacatccaca gtataaggca 240  
 cctacagaaa accatcataa tagaggccct actatgcaaa atgatggaag gaaagaaaag 300  
 ccagttcact ttaaagaatt cagaaaaaat acaaattcaa agaaatgcag tcctgggcat 360  
 gattgtagag aaaattctca ttctttcaga aaggcttggt ctggtgtatt tgattg 416

<210> 13  
 <211> 609  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 25, 152, 166, 169, 173, 174, 180, 183, 186, 192, 193, 198, 200  
 <221> unsure  
 <222> 205, 220, 230, 233, 236, 243, 246, 251, 285, 307, 309, 310, 317  
 <221> unsure  
 <222> 319, 329, 344, 345, 377, 475, 485, 556, 573, 583, 594  
 <223> a or g or c or t, unknown, or other

<220>  
 <221> misc\_feature  
 <223> Incyte clone 1211009T1

<400> 13  
 aagaacatta tatattattca gaaanattaa gtattttcaaa ggtaaaaaat gaagctaaca 60  
 tttgaagatt aggtaagttt catgttacag aatataaaga tgaaaatgga taaaaaatta 120  
 ttatgaagta cacacattag aatttgactt gnttagtttg cctctntgng ccnntacctn 180  
 tancanaggt anntatgngn ctaantatca taactaagcn ggtacatggn atnganaagt 240  
 ganaanaggt nggacattag aaattattat atatgagctc ttctnacttc agagtaaaat 300  
 ttgtgtngnn cattccnanc ttccaaaant gaataaatat atannagatt aaaggaaaat 360  
 aatttcactt aagggtgntct tttcatataa actataatga gaagaaacaa acttggccaa 420  
 agtaggattt tatatattct taactgattt ttaagataga aaattaaacc atttntctca 480  
 gtcanaagtg taacgttata atgaaatggt ccatttgtaa cagctaataa tttttagact 540  
 ccatctttca atttantctg aattctctca gtngccataa agncaactct tagnaacggt 600  
 accttcaag 609

<210> 14  
 <211> 189  
 <212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<223> Incyte clone 1352052H1

<400> 14

```
cttcacatcc gtcctcctgt ctcagggctg gcagggggag cctggaatta cccctagtg 60
atggaatgac aggggtctggt ggggactgaa ttccctggcc ctgggggtcat agcttgggct 120
gttccttctc tgatacggga agagacccca atcagatttt tcaaattaaa gccagtcctg 180
ggaaatctc 189
```

<210> 15

<211> 473

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 34, 59, 60, 134, 168, 311, 314, 344, 347, 354, 364, 391, 393, 401

<221> unsure

<222> 407, 413, 416, 426, 445, 446, 447, 453, 454, 459, 471

<223> a or g or c or t, unknown, or other

<220>

<221> misc\_feature

<223> Incyte clone 1391767F1

<400> 15

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gaaaaaaagg aaatagcaat cttacgggaa agantcactg agctggaacg gaagctaann 60
ttcgaacagc agcgttctga tttgtgggaa agattgtatg ttgaggcaaa agatcaaaat 120
ggaaaacaag gaanagatgg aaaaaagaaa gggggcagag gaagccanag ggctaaaaat 180
aagtcaaagg aaacattttt gggttcagtt aaggaaacat ttgatgccat gaagaattct 240
accaaggagt ttgtaaggca tcataaagag aaaattaagc aggctaaaga agctgtgaag 300
gaaaatctga naanattctc agattcagtt aaatccactt tccnggnact ttanagtacc 360
cccnagggta tctttgatga aaagggtaat nanagtttgg ngctacnaaa gangcnagct 420
gaaaanccag gacagttttt agggnnntat tgnnatccnc agtataaggc ncc 473
```

<210> 16

<211> 529

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 119, 501

<223> a or g or c or t, unknown, or other

<220>

<221> misc\_feature

<223> Incyte clone 1477338F1

&lt;400&gt; 16

```

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tggccctgtt ctatctctta aatccttaca cgattttgtc ttgtgttgcc aagtctacnt 120
gtgccatcaa caacaccctc attgctttct tcattttgac tacgataaaa ggcagtgtt 180
tcctcagtgc tatttttctt gccttagcga cataccagtc tctgtaccca ctcacctgt 240
ttgtcccagg actcctctat ctccctcagc ggcagtacat acctgtgaaa atgaagagca 300
aagccttctg gatcttttct tgggagtatg ccatgatgta tgtgggaagc ctagtggtaa 360
tcatttgccct ctcccttctt cttctcagct cttgggattt catccccgca gtctatggct 420
ttatactttc tgttccagat ctcaactcaa acattgggtc tttctggtag ttctttgcag 480
agatgtttga gcacttcagc ntcttctttg tatgtgtgtt cagatcaac 529

```

&lt;210&gt; 17

&lt;211&gt; 581

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; unsure

&lt;222&gt; 372, 374, 445

&lt;223&gt; a or g or c or t, unknown, or other

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte clone 1520634F1

&lt;400&gt; 17

```

gccatcccc tgcctcagc ctctggcatt ttctctcggt gagaccatgg agggccctcc 60
ccgtcggact tgcgctccc cagaacctgg accttctctc tccatcgat ctccccaggc 120
ttcatctcct ccaaggccca accactacct gcttattgac actcagggtg tccccacac 180
agtgtgtgtg gacgaggagt cacagaggga gccaggggccc agtggggctc caggccagaa 240
aaagtgttac agctgccccg tgtgtctcaag ggtcttcgag tacatgtcct accttcagcg 300
acacagcatc acccactcgg aggtaaagcc cttcgagtgt gacatctgtg ggaaggcatt 360
caagcgcgcc ancnaacttg cacggcacca ttccattcac ctggcggtg gtggcgggcc 420
ccacggctgc ccgtctgtcc ctgcncgttc cgggatgcgg gtgagctggc ccagcacagc 480
cgggtgcact ctggggaacg cccgtttcag tgtcacactg cctcgccgtt tatggagaga 540
acacactgca gaaacacacg ggtggaagca tccatgagcg g 581

```

&lt;210&gt; 18

&lt;211&gt; 637

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; unsure

&lt;222&gt; 462, 485, 510, 514, 550, 562, 602, 617, 622, 625, 629, 636

&lt;223&gt; a or g or c or t, unknown, or other

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte clone 1525569F6

&lt;400&gt; 18

```

cagtaatcag cccagtcctg cctttagacg acgccgtgct aggaagaaga ccgtttctgc 60

```

```

ttcagaatct gaagaccggc tagttgctga acaagaaact gaaccttcta aggagttgag 120
taaacgtcag ttcagtagtg gtctcaataa gtgtgttata cttgctttgg tgattgcaat 180
cagcatggga tttggccatt tctatggcac aattcagatt cagaagcgtc aacagttagt 240
cagaaaagata catgaagatg aattgaatga tatgaaggat tatctttccc agtgtcaaca 300
ggaacaagaa tcttttatag attataagtc attgaaagaa aatcttgcaa ggtgttggac 360
acttactgaa gcagagaaga tgtcctttga aactcagaaa acgaaccttg ctaccagaaa 420
atcagtatctt aagagtatcc ttggagaagg aagaaaaagc cntatcctca ttaccagga 480
agagntaaac aaacttaaga ggaccagttn gganattgga agataaaggg gacaagtact 540
gaattagttn aaggaaaatc cngaaacttt aagcagcctt tggaagaggg aaagccggaa 600
anacaccagc tttcctnagt cnaangggng acctnt 637

```

```

<210> 19
<211> 187
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> unsure
<222> 13, 19, 21
<223> a or g or c or t, unknown, or other

```

```

<220>
<221> misc_feature
<223> Incyte clone 1554775H1

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```

<400> 19
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aagatggcgg aggcggggga tttctggtag gtccactttt aggacaagat gtggtaccgt 120
tgaagcgtca gtctttgatt cacagacagt tgagcttttc agctgggaag cctttccatt 180
ttttttt 187

```

```

<210> 20
<211> 499
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> unsure
<222> 406, 435
<223> a or g or c or t, unknown, or other

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```

<220>
<221> misc_feature
<223> Incyte clone 1596581F6

```

```

<400> 20
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cggaccctta tggaaatgcg ttacatccct ttgaaagtgg ccctgttcta tctcttaaatt 120
ccttacacga ttttgtcttg tgttgccaag tctacctgtg ccatcaacaa caccctcatt 180
gctttcttca ttttgactac gataaaaggc agtgcttttc tcagtgtat ttttcttgcc 240
ttagcgacat accagtctct gtaccactc accttgtttg tcccaggact cctctatctc 300

```

```

ctccagcggc agtacatacc tgtgaaaaatg aagagcaaag ccttctggat cttttcttgg 360
gagtatgcca tgatgtatgt ggggaagccta gtggtaatca tttgcntctc cttcttcctt 420
ctcagctctt ggganttcac ccccgagctc taatggctta tactttctgt tccagatctc 480
atccaaacat tgggtcttt 499

```

```

<210> 21
<211> 287
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> unsure
<222> 122, 144, 266, 273
<223> a or g or c or t, unknown, or other

```

```

<220>
<221> misc_feature
<223> Incyte clone 1596581T1

```

```

<400> 21
ggcttggccc agcttctggc cccacagccc cctgaggtcc atgcagccct gtgccagcca 60
ggcctacttg agcacgagca tggcctctgt gccatccttg gcggtcaagt agaggccatg 120
tntgaggtag tactcccgcc gcangaaggc atagaagtaa tcagagatga gcaggatctg 180
cccaacgttg aaggtcagtg tgatggcata aaagaaatta gagttggcac ttcctgcata 240
aatccagagg tgccacagga caggggnagaa cangggacag acgattt 287

```

```

<210> 22
<211> 579
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> unsure
<222> 22, 25, 32, 106, 123, 126, 135, 208, 216, 219, 234, 236, 263, 271
<221> unsure
<222> 282, 287, 292, 358, 360, 363, 365, 379, 412, 441, 452, 459, 483
<221> unsure
<222> 485, 499, 500
<223> a or g or c or t, unknown, or other

```

```

<220>
<221> misc_feature
<223> Incyte clone 162871X4

```

```

<400> 22
ctaaagaaga gcggtagggg gncnngggc tngtcccaga aagtatggcg gaggcggggg 60
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tcncanacag ttganctttt cagctgggaa gcctttccat tttttttttt aacggctttc 180
tgaacctatg aaacctatggc aaaagganaa acaaantcnc ctgggcccac aaantntggc 240
ccatatattt catctgtcac tanccaaatt ntgaacttga tnattcnagg antattgcta 300
ttttttattg gagtatttct tgcattagtg ttaaatttac ttcaaattca aaaaaatntn 360
acnncctttc cacctgatnt gattgcaagc atcttttctt ctgcatgctg tnattggggt 420
attatacccc tgcattaaca nacatctagg anaaccacnt aaatttaaaa aaaagtggtc 480

```

cantntaatg cgggtgtgttn cagtctttgt tggataaaat catgccagtg ctaaagtgga 540  
 tttcgataac aacatacagt tgtctctcac actggcgca 579

<210> 23  
 <211> 250  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 8, 17, 24, 27, 33, 36, 43, 246  
 <223> a or g or c or t, unknown, or other

<220>  
 <221> misc\_feature  
 <223> Incyte clone 162871X92

<400> 23  
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 ttctgctgtg attgggttat tatacccctg cattgacaga catctaggag aaccacataa 120  
 atttaaaaga gagcgggtcca gtgtaatgcg gtgtgtagca gtctttgttg gtataaatca 180  
 tgccagtgc aaagtggatt tcgataacaa catacagttg tctctcacac tggctgcact 240  
 atcttnaaaa 250

<210> 24  
 <211> 250  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 8  
 <223> a or g or c or t, unknown, or other

<220>  
 <221> misc\_feature  
 <223> Incyte clone 1658067H1

<400> 24  
 cgacagtngg ggacgtggcg ctctacatgg cttcttccc cgtgtggaac catctctaca 60  
 gattcctgag aaacatcttt gtcctcacct gcatcatcat cgtctgttcc ctgctcttcc 120  
 ctgtcctgtg gcacctctgg atttatgcag gaagtgccaa ctctaatttc ttttatgcca 180  
 tcacactgac cttcaacgtt gggcagatcc tgctcatctc tgattacttc tatgccttcc 240  
 tgcggcgga 250

<210> 25  
 <211> 736  
 <212> DNA  
 <213> Homo sapiens

<220>



<221> unsure  
 <222> 419, 435, 453, 462, 463, 471, 476, 513, 516, 563, 585, 586, 597  
 <221> unsure  
 <222> 611, 618, 652, 661, 680, 684, 685, 692, 693, 701, 714, 725, 731  
 <223> a or g or c or t, unknown, or other

<220>  
 <221> misc\_feature  
 <223> Incyte clone 1706512F6

<400> 25  
 atcagaagct cttcactgac tttgttaatg atgttaaaga ttatcttaga aacatgaagg 60  
 aatatgaagt agataatgat ggagtatttg agaagttgga tgaatatata tatagacact 120  
 tctttggtca cactttttcc cctccatatg gacccaggtc ggtttacata aaaccgtgtc 180  
 attacagtag tttgtaacat ttgtagattg gatagcattt ttatgatttg atgagtttct 240  
 tgtaagggtta ccgttttctaa gagttgtgct ttatgggcac tgagagaatt ccagaataaa 300  
 ttgaaagatg ggagtcctaa aaatttaatt agccggttac caaatgggga ccttttccat 360  
 tagtaacggt gattccacct ttggaccttt gaggccaaat gggtttaaat ttttttaanc 420  
 ccttaaaaaa atccnggttt aaaggaatta ttnttaaaga annccccacc nttttngggc 480  
 ccaaggtttt ggttttccct ttttccattt aanaanggtt ttaataatgg aaaaaaggat 540  
 tccacccttt aaaggtggga aantttaatt ttttccccct taaannccct ttttaanggg 600  
 aatttaaatt nccccttnct gggaagccca agggaatgga ggcccacccc cnaattttta 660  
 nccccggaag gtccggaagn ggcnnctat annaataatt nccaaaggtc cccncccaat 720  
 tttcncctgg ncccat 736

<210> 26  
 <211> 611  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 213, 223, 369, 406, 423, 469, 475, 490, 494, 498, 524, 548, 570  
 <221> unsure  
 <222> 574, 582, 584, 594, 597, 605, 607  
 <223> a or g or c or t, unknown, or other

<220>  
 <221> misc\_feature  
 <223> Incyte clone 1722946F6

<400> 26  
 attggcgccc gagctgtgac cgccgccact ggggcagcca gcacaatcgg gcggagggtgg 60  
 cgctgcccct tcagacctga aagatgtctg aaaattccag tgacagtgat tcatcttgtg 120  
 gttggactgt catcagtcac gaggggtcag atatagaaat gttgaattct gtgaccccca 180  
 ctgacagctg tgagcccgcc ccagaatgtt canctttaga gcnagaggag cttcaagcat 240  
 tgcagataga gcaaggagaa tgcagccaaa atggcacagt gcttatggaa gaaactgctt 300  
 atccagcttt ggaggaaaacc agctcaacaa ttgaggcaga ggaacaaaag ataccggaag 360  
 acagtatcna tattggaact gccagtgggtg attctgatat tgttanccct tgagccacta 420  
 agnttagaag gaattgggga tccaagaagt tgtcattgtt gaagaaagnc caagntccgg 480  
 agacttttan catngggntc ttctcttagc agccagtata cttntctgtt cagcccagaa 540  
 aactggantt tcatcttcag cctaatagacn gtgnaatcaa gntngtgatg gaancngtt 600  
 attcngnccc c 611

<210> 27  
 <211> 592  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 94, 104, 149, 167, 215, 226, 232, 275, 298, 301, 312, 333, 362  
 <221> unsure  
 <222> 364, 367, 376, 391, 392, 395, 412, 415, 419, 429, 435, 443, 449  
 <221> unsure  
 <222> 452, 462, 463, 464, 466, 467, 468, 470, 476, 485, 489, 492, 502  
 <221> unsure  
 <222> 514, 529, 533, 541, 550, 557, 558, 567, 572, 574, 577, 580  
 <223> a or g or c or t, unknown, or other

<220>  
 <221> misc\_feature  
 <223> Incyte clone 1853196F6

<400> 27  
 ctttcagaaa ggcttggttct ggtgtatttg attgtgtctca acaagagtcc atgagccttt 60  
 ttaacacagt ggtgaatcct ataaggatgg atgnatttag acanataatt caaaggtaca 120  
 tggtaaaaga actggatact ttttgtcant ggaacgaact tgatcanttc atcaataagt 180  
 ttttcctaaa cgggtgtcttt atacatgatc agaancctctt cactgncctt gntaatgatg 240  
 ttaaagatta tcttagaaac atgaaggata tgaantagat aatgatggag tatttgcnaa 300  
 nttggatgga tntatatata gacacttctt tgntcacact ttttccccctc catatgggcc 360  
 cngntcngtt tacatnaaac cgtgtcttac nntantttgt aacatttgta gntgnatanc 420  
 atttttaant ttgangagtt tcntgtaang tnacgggtcc annngnnntn ctttanagcc 480  
 accanagana antcggataa antgaaagta gggntccaaa attattaant gtnccaatag 540  
 nactttcctn ataaagnngt caccttngct tnancnratn gggttaattt tt 592

<210> 28  
 <211> 447  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <223> Incyte clone 2238411F6

<400> 28  
 tttgggcacc agcctctgag ggcctcaaac caggccctga ggatgggccc ggcaaggagg 60  
 aagctccgga gctggacgag gccgaattgg actacctcat ggatgtgctg gtgggcacac 120  
 aggcactgga gcgaccgccg gggccagggc gctgagccct cgtgctggaa tggttgtctg 180  
 gtatctgaac tgagcctgct ggctggacca actgtcctcg aaaagacaca gctggcttcc 240  
 ctagtacaga gaacagggct tggggcactt tggagagaca gaatctagtc ctgggcaact 300  
 tcacatccgt cctcctgtct cagggctggc agggggagcc tggaattacc ccctagtgtat 360  
 ggaatgacag ggtctggtgg ggactgaatt ccctggccct ggggtcatag cttgggctgt 420  
 tccttctctg atacgggaag agacccc 447

<210> 29  
 <211> 247

<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 234  
<223> a or g or c or t, unknown, or other

<220>  
<221> misc\_feature  
<223> Incyte clone 2312928H1

<400> 29  
tgctgggtggt ggctgtgaca gtgcggggcgg ccttggtccg ctccagtctg gccgagttca 60  
tttccgagcgg ggtggagggtg gtgtccccac tgagctcttg gaagagagtg gttgaaggcc 120  
tttcaactggt ggacttgagg gtatctccgt attctggagc agtatttcat gaaactccat 180  
taataatata cctcttttcat ttcctaattg actatgctga attggtgttt atgntaactg 240  
atgcact 247

<210> 30  
<211> 190  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 162, 163  
<223> a or g or c or t, unknown, or other

<220>  
<221> misc\_feature  
<223> Incyte clone 3015795H1

<400> 30  
acttcacatc cgtcctcctg tctcagggct ggcaggggga gcctggaatt accccctagt 60  
gatggaatga caggggtctgg tggggactga attccctggc cctgggggtca tagcttgggc 120  
tgttccttct ctgatacggg aagagacccc aatcagattt tnnaaattaa agccagtcct 180  
gggaaatctc 190

<210> 31  
<211> 253  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 121  
<223> a or g or c or t, unknown, or other

<220>  
<221> misc\_feature

<223> Incyte clone 3231214H1

<400> 31

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gtttcagatc aacgtcttct tctacaccat ccccttagcc ataaagctaa aggagcaccc 60
catcttcttc atgtttatcc agatcgctgt catcgccatc tttaagtcct acccgacagt 120
ngggggacgtg gcgctctaca tggccttctt ccccggtgtg aaccatctct acagattcct 180
gagaaacatc tttgtcctca cctgcatcat catcgctctg tccctggctc tccctgtcc 240
tgtggcacct ctg 253
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<210> 32

<211> 273

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 88

<223> a or g or c or t, unknown, or other

<220>

<221> misc\_feature

<223> Incyte clone 3985439H1

<400> 32

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gtcttccttg cgtgtgcgtg cacgttgggt gctgggggggt ggagaccgga tctatcctcg 60
cttgggtact ttcctctcgg tgtgtgtntc tggccggagc cgtttcgcga cggcccgggc 120
gccccgcccc aaccttctt ccctagaccc tctctctcc cttcggttc tctctttcgg 180
ccggcgccgc cagttcctgg ggcacaccca gaggtccct tctcgccgcc gcctgcaact 240
gcgagggtag cccggggccg cttggagtcg ccc 273
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<210> 33

<211> 618

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 190, 336, 351, 413, 420, 423, 432, 441, 449, 454, 462, 510, 520

<221> unsure

<222> 524, 530, 552, 555, 557, 560, 561, 569, 574, 584, 585, 594, 596

<221> unsure

<222> 611, 614

<223> a or g or c or t, unknown, or other

<220>

<221> misc\_feature

<223> Incyte clone 403002R6

<400> 33

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tgctggtgga cgaggagtca cagagggagc caggggccag tggggctcca ggccagaaaa 60
agtgtctacg ctgccccgtg tgctcaaggg tcttcgagta catgtcctac cttcagcgac 120
```

```

acagcatcac ccaactcggag gtaaaagccct tcgagtgtga catctgtggg aaggcattca 180
agcgcgccan ccaattggca cggcaccatt ccattcacct ggcggtgtgt gggcggcccc 240
acggctgccc gctctgccct cgccgcttcc gggatgcggg tgagtggccc aagcacagcc 300
gggtgcactc tggggaacgc ccgtttcagt gtcaanactg ctttcgccgg nttaaatgga 360
gcagaacaca attgcagaaa acaacaccgc ggttggaag catcccattg aancgggggn 420
ttncgggtt tncccaagg ntaccaaang gaanttttc anagggaac cttgaaatt 480
ccctgttcca aaaaaacctt ggttaaaan ccctaaaggn tggnttttn aggggccttg 540
gaaaaacagg ancanangn nagcgggant ttnaaagg aaannccctt gccnanaagg 600
gggaatcccc naantaat 618

```

<210> 34  
 <211> 297  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <223> Incyte clone 510407R6

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<400> 34
tgagtaatct tcaggtcctc cgtgttctgg agctgagatg ggaatgagcc cctacacaga 60
atggagtcct ctaggctaaa gatatacagc gttccatggc agagccttga ctggatggag 120
gtggggagtg tgggtgtgta agtctctggc ctcataaaag gtggctgtgg gtcgtcagga 180
atctgcgcca tcttcctggg gcttctgcgc tgttggtggg gaagggaccc cagtcttgcc 240
ttccaccccc caaccaggcc tgagactgat caacaataa acacgtttcc cactctg 297

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<210> 35  
 <211> 239  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 91  
 <223> a or g or c or t, unknown, or other

<220>  
 <221> misc\_feature  
 <223> Incyte clone 3590729H1

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<400> 35
ggcgagtgtc tgggcagaag aggttcgagt ccagggtcac aagtctctgg taccaaaagg 60
gacccatggc tgactgacag caaggcctat ngggaagaac tgggagctcc ccaacttgga 120
ccccacctt gtggctctgc acaccaagga gccccctccc agacaggaag gagaagaggc 180
aggtgagcag ggcttggttag attgtggcta ctaataaat gttttttgtt atgaagtct 239

```